UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/535,676	03/23/2000	Mayer D. Schwartz	7049 US	2181

7812	7590	01/19/2006

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EXAMINER
FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,10 and 11* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 November 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 10/11/2005 has been entered.

Response to Amendment

The amendment filed 11/16/2005 is objected to under 35 U.S.C. 132(a) because it

introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall

introduce new matter into the disclosure of the invention. The added material which is not

supported by the original disclosure is as follows: newly added figure 4 illustrates a system target

decoder and contents provided within a system target decoder including a decoder buffer.

Applicant's specification as originally filed does not support the above system components. In

particular, see applicant's originally filed specification at e.g., page 2, lines 11-21 and page 4,

lines 4-9. Note the above cited sections only mentions a decoder and not necessarily a *target*

decoder and also *a decode buffer*. As such, figure 4 is refused entry. The paragraph beginning

on page 4, line 4 is also refused entry since the paragraph references the above figure 4 which is

at issue. The paragraph starting at page 6, line 11 is also refused entry since Q_j was not

previously defined by the specification. As result, the statement of at time δ before DTSi, frame

1 begins loading into the buffer and continues loading until time $\delta + R_n*Q_1$ before DTS_1 is not

supported by applicant originally filed specification. Also the statement of since frame 1 has

fewer bits than the capacity of one slot, R_n*Q_1 is less than DTS1 – DTS2 and there is a gap

before frame 2 starting loading into the buffer, at time δ before DTS2 is also not supported based

on R_n*Q_1 is less than DTS1 – DTS2. Examiner notes the same statements above further apply to

fames 4 and 5 as amended in the paragraph.

Note that the amendment filed 11/16/2005 for the paragraph starting at page 6, line 11

replaces the previously filed amendment 10/11/2005 which was not in proper format (i.e., no

marked up version was filed).

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

2. This Office action is in response to applicant's paper filed 11/16/2005. **Claims 1-7 and**

10-11 as amended are still in consideration for this application. Applicant has canceled claims 8-

9. Applicant has added claims 10-11.

3. Examiner **withdraws** the 112-first paragraph rejection(s). In particular, the previous

112-first paragraph rejection is withdrawn based on applicant's claim amendment. However,

please see the new rejection with respect to the newly added claims.

4. Examiner does **not withdraw** the obviousness rejection to *Haskell* in view of *Zhu*. The

following comments fully address applicant's arguments with respect to the rejection.

Applicant's arguments filed 11/16/2005 do not address the above obviousness rejection. As

such, the rejection is maintained (see below).

5. Please note that even though the same rejection is applied, the following rejection is

made non-final since applicant paid for a continued examination.

Drawings

6.   The drawings are objected to because the drawing filed 10/11/2005 contains no figure

number or reference number and thus is not referenced by the specification including the Brief

Description of the Drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are

required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior

version of the sheet, even if only one figure is being amended. The figure or figure number of an

amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the

appropriate figure must be removed from the replacement sheet, and where necessary, the

remaining figures must be renumbered and appropriate changes made to the brief description of

the several views of the drawings for consistency. Additional replacement sheets may be

necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either "Replacement Sheet"

or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

8.   **Claims 10 and 11** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed

invention. In particular, for **claim 10** applicant claims comparing a time δ before the time

indicated by the decode time stamp of the (J + 1) 'th picture which is inconsistent with

applicant's specification. Specifically, teaches comparing the current J picture and not the (J +1)

'th picture, see e.g., page 4, line 21 – page 5 of applicant's specification. In particular, note the

equation, $t_n^j(j) + \delta_n >= td_n(j)$ which compares the current packet (i.e., the DTS of the *next* picture

is not taught in the specification). Applicant's figure 3 does not further support the recited

claimed subject matter. Support for **claim 11** is found e.g., at page 5, lines 13-16 of applicant's

specification, however, the claim is rejected since it further depends on rejected claim 10.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

10.   **Claims 1-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent

No. 5,287,182 to Haskell et al. (*"Haskell"*) in further view of U.S. Patent No. 5,534,937 A to *Zhu*

et al. (*"Zhu"*).

        As to **claim 1**, applicant claims transferring a picture frame from the smoothing

buffer <u>prior</u> to the picture's decoder time stamp as shown in applicant's figure 3. In

particular, applicant recognizes that by transferring pictures from the smoothing buffer

commencing at a specified time prior to the pictures DTS, the possibility of the decoder

buffer overflow is greatly reduced and therefore the quality of the picture is greatly

enhanced. *Haskell* discloses a timing recover for VBR video on ATM networks. In

particular, *Haskell* discloses the importance of eliminating buffer overflow/underflow at

the receiver (e.g., see column 1, lines 46-50 and column 3, lines 33-43). Specifically,

Haskell discloses alleviating underflow prior to decoding (e.g., see column 2, lines 5-13).

See e.g., figure 2 with respect to a receiver and specifically a demultiplexing unit 200.

Shown in figure 2, *Haskell* discloses demultiplexing VBR streams of data composed of

sequences for a picture based on a decode time stamp. In particular, one example of a

smoothing buffer is video data buffer 202 which works in combination with a video

display console 203 before entering a decoder 204 (e.g., see column 5, lines 4-20).

Examiner would like to point out that part of the purpose of the video data buffer (i.e.,

smoothing buffer) is to load the buffer early with packets for a frame so that when the

frame's decode time comes, the full data for the fame is available for decoding. *Haskell*

discloses controlling overflow by adjusting (i.e., increasing) the size of the buffer in order

to load the buffer early with packets for a frame so that when the frame's decode time

comes, the full data for the fame is available for decoding (e.g., see column 5, lines 46-

54). *Haskell* discloses controlling buffer underflow by using a buffer fullness value used

to control a jitter delay value which indirectly controls the way information is released

from the buffer (e.g., see column 6, lines 9-14). Examiner would like to point out that the

information is released from the buffer (i.e., "transferred" in reference to the recited

claimed subject matter) based on the DTS (e.g., see column 5, lines 4-20), however, the

Haskell also recognizes that increasing the size of a buffer (i.e., "loading" in reference to

the recited claimed subject matter) helps control overflow which removes the implicit

assumption that the video data buffer is only big enough to store a single image frame.

Haskell may be silent or deficient to disclosing a statistically multiplexed stream.

In particular, *Haskell* discloses a VBR stream for the decoder but is silent or deficient to

the type of stream before the demultipelxer (e.g., see column 1, lines 5-10). Examiner

notes that it would have been obvious to one skilled in the art prior to applicant's

invention to have a statistically multiplexed MPEG transport stream. Examiner notes one

skilled in the art would be motivated to multiplex various streams together for the

purpose of statistical multiplexing as is inherent in ATM. As such, the background of

Haskell cures the above-cited deficiency by disclosing that the data is statistically

multiplexed (e.g., see column 20, lines 19-24). *Zhu* also helps to further clarify statistical

multiplexing with respect to figure 9 for a video source (e.g., such as MPEG video). In

particular, a CBR stream is sent using statistical multiplexing as VBR where it is later

converted to CBR before entering a video decoder 910. *Zhu* also teaches a smoothing

buffer 926 as well.

As to **claim 2**, in addition to applicant's admission in the background, see e.g.,

column 5, lines 13-20 of *Haskell*.

As to **claim 3**, data is saved in the video decode buffer as soon as it arrives.

As to **claim 4**, see the combined rejections for claims 1 and 3.

As to **claims 6-7,** since the decode buffer and smoothing buffer are the same, see

claim 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123.

The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663

DWF